U.S. Department of the Interior Bureau of Land Management

Environmental Assessment DOI-BLM-ID-B010-2014-0039-EA

HOFFMAN-DUFFEY DAM RECONSTRUCTION

August 12, 2014

U.S. Department of the Interior Bureau of Land Management Four Rivers Field Office 3948 S. Development Avenue Boise, ID 83705



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1.0 Introduction

Located on land administered by the Bureau of Land Management, Hoffman-Duffy Dam and Reservoir (H-D) was constructed around 1915 by private parties, presumably to store water for irrigation of farm lands downstream. A right-of-way for the dam and irrigation water conveyance route was originally granted in 1911, and was relinquished in 1924. A subsequent right-of-way was granted to another private party in1954, and was terminated in1993 due to non-use. The reservoir right-of-way is now held by the Bureau of Land Management (BLM), which now has full responsibility for operation, safety, and maintenance of H-D.

Need for and Purpose of Action

The dam height and reservoir water impoundment capacity at H-D places this structure under the regulatory authority of the Idaho Department of Water Resources (IDWR). As such, the reservoir is inspected periodically by IDWR, and a <u>Dam and Reservoir Certificate of Approval</u> (CA) is issued, provided the dam is considered safe to operate, and is properly maintained to IDWRs satisfaction.

In 2008, IDWR granted a Certificate of Approval_for H-D Reservoir, contingent on BLM performing certain maintenance items specified in the approval letter dated November 1, 2008. However, upon IDWRs inspection of H-D in July 2010, IDWR found that the maintenance items were not completed; therefore, IDWR refused to grant another CA for H-D. Accordingly, BLM was directed to not impound water in the reservoir until the maintenance items were completed, or the dam height was lowered.

Hoffman-Duffy Dam meets those metric criteria described in the <u>Dam Height Convention</u> in <u>Idaho Administrative Rules (IDAPA) 37.03.06</u>, which states in part: "Dams greater than or equal to ten (10) feet in height, or reservoirs greater than or equal to fifty (50) acre-feet storage capacity are regulated by the Idaho Department of Water Resources <u>Dam Safety Program</u> unless specifically exempted per <u>Idaho Code 42-1711</u>.

In its current configuration, H-D is classified as a *significant hazard* dam by IDWR standards. *Significant hazard* dams are those structures whose failure could result in damage to developed downstream property and infrastructure, or if dam failure should occur, could result in a direct or indirect loss of human life.

To comply with IDWR directive to either maintain the dam as requested, or in lieu of maintenance, covert the H-D from a *significant hazard* dam to a non-hazard-rated dam, BLM proposes to reduce the dam and spillway height by \sim 12-feet, after which the water column behind the dam, measured vertically from the downstream toe of the dam, to the top of the static water column or spillway invert would be \leq 6-feet.

Deconstructing H-D would remove the threat of catastrophic failure over the short through long term. In addition, the dam would not be categorized or assigned a hazard rating of any kind. As a result, the dam would no longer be subject to the regulatory authority of IDWR, and would not

be inspected periodically. There would be no public safety issue associated with the remaining stock pond.

1.1 Decision to be Made

The decision to be made is whether to comply with IDWR's request to maintain the dam as requested, or alternatively, lower Hoffman-Duffy Dam to State of Idaho standards for low-head dam height conventions.

1.2 Summary of Proposed Action

Using a variety of heavy equipment, BLM would reduce the dam crest elevation of H-D, and construct a new spillway to limit the height of the static water column behind the dam to \leq 6-vertical-feet. A portion of the dam would remain in place, so a much smaller water-body would continue to supply stock water in the affected pasture. The area would be re-seeded following construction.

1.3 Location and Setting

The project is located 6 miles east of Mountain Home, Idaho, 0.4 miles south of state highway #20 (Map 1). The legal description is as follows: Township 03 South, Range 07 East, Section 02 SE¹/₄SE¹/₄.

1.4 Conformance with Applicable Land Use Plan

Although the proposed maintenance to improve public safety is not specifically provided for in the 1983 Kuna Management Framework Plan, the proposed action would maintain wildlife habitat and meet objective WL-4.5 "Provide reasonable nesting and brood-rearing habitat for waterfowl along 94 miles of rivers, streams, and reservoirs within the Kuna Planning Unit."

1.5 Relationship to Statutes, Regulations, and Other Requirements

Public Safety

Idaho Department of Water Resources dam safety statutes are enumerated in <u>Idaho Code Title</u> 42, <u>Chapter 1709-1721</u>.

Public Law 91-190, the National Environmental Policy Act of 1969, states in part "assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surrounding ..."

Wildlife

Special Status Species Management Manual for the Bureau of Land Management (BLM Manual 6840): National policy directs BLM State Directors to designate sensitive species in cooperation with the state fish and wildlife agency. This manual establishes policy for management of species listed or proposed for listing pursuant to the ESA and Bureau sensitive species that are found on BLM-administered lands; this policy is to conserve and to mitigate adverse impacts to sensitive species and their habitats. Where relevant to the activities associated with this action, effects to special status species are analyzed in this EA.

Migratory Bird Treaty Act, Executive Order 13186, and BLM Memorandum of Understanding WO-230-2010-04 (between BLM and US Fish and Wildlife Service [USFWS]): Federal

agencies are required to evaluate the effects of proposed actions on migratory birds (including eagles) pursuant to the *National Environmental Policy Act of 1969* (NEPA) "or other established environmental review process;" and restore and enhance the habitat of migratory birds, as practicable. Federal agencies are also required to identify where unintentional take reasonably attributable to agency actions is having, or is likely to have, a measurable negative effect on migratory bird populations. With respect to those actions so identified, the agency shall develop and use principles, standards, and practices that will lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the Service. Effects to migratory birds are analyzed in this EA.

Cultural Resources

Idaho BLM has the responsibility to manage cultural resources on public lands pursuant to the National Historic Preservation Act of 1966 (as amended), the 2012 Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers and the State Protocol Agreement Between the Idaho State Director of the BLM and the Idaho State Historic Preservation Officer (1998) and other internal policies.

2.0 Description of the Alternatives

2.1 Alternatives Considered But Not Analyzed in Detail

Maintaining the existing dam as-is was considered but not analyzed as it was determined that continuing maintenance of the dam was more expensive over the long term than reducing the height of the dam and more of a safety concern if breached.

2.1.1 Alternative A - No Action/Continue Present Management

The BLM would take no action to reduce the height of H-D dam.

2.1.2 Alternative B - Proposed Action

The BLM would reduce the dam crest height and spillway invert elevation of H-D by approximately 12 feet (Appendix 1). The existing steel irrigation headworks (pipe and screw gate) would be excavated, removed, and recycled if possible. The lower portion of the dam would be reconstructed. A rock-lined, trapezoidal-shaped spillway would be built near the centerline of the remaining dam. The rebuilt dam would provide approximately 11.7-acre-feet of stock water in the Rock Lake Pasture of the Mountain Home Subunit Allotment (00813).

Prior to commencing construction activities, BLM would submit to IDWR an Application for Construction or Enlargement of a New or Existing Dam. The design (Appendix 1) generally would be expected to meet or exceed the design and construction requirements identified in the Idaho Administrative Rules (IDAPA) 37.03.06.

A dozer, track-hoe, dump trucks, graders, and other supporting equipment would be used during construction activities. The work site would be from State Highway 20. Approximately 1,450 feet of existing 2-track would be graded and a small staging area created (Appendix 1). Approximately 200 feet of new temporary road would be lightly bladed to access the top of the dam from the northern side. Following project completion, large rocks would be returned to the

newly bladed road extension to prevent future use. To minimize the disturbance "foot print," spoil generated from lowering the dam would be deposited up and downstream stream in an area previously excavated and disturbed when the H-D was first constructed. Most spoil would be distributed below the high water line of the original reservoir basin, and would be contoured to conform to the surrounding area. Following construction, all disturbed areas with bare soil would be re-seeded with Siberian wheatgrass, or other adapted grass species. The area would be monitored and treated for noxious weeds should they appear in the project area in the years following construction. To minimize disturbance to migratory waterfowl or local resident bird species, construction would occur sometime in the early to late fall of 2014.

The un-named stream above and below H-D is not a tributary to a 303(d) listed stream, and has an intermittent flow-regime; therefore, a stream alteration permit (404 permit) is not required from U. S. Army Corps of Engineers (Amy Howard, ACOE, pers. comm.), nor is a 401 water quality certification required by Idaho Department of Water Resources (Aaron Golart, IDEQ, pers. comm.).

3.0 Affected Environment and Environmental Consequences

3.1 Riparian/Wetland Areas, Stream Channels and Floodplains, and Water Quality

3.1.1 Affected Environment - Riparian/Wetland Areas, Stream Channels and Floodplains, and Water Quality

Riparian Areas

Riparian vegetation in the project area is limited to a 550-foot-long area below the dam. This riparian area is entirely artificial, as it is supplied water as a direct result of storage water seepage below the reservoir. It its natural state, this stream was likely vegetated with upland plant species (e. g., basin wildrye) and facultative wetland species (e. g., arroyo willows), as the stream has a natural intermittent flow regime that cannot support obligate riparian vegetation.

Stream Channel and Floodplain

The stream channel is nearly 100% stable as it flows through basalt substrates which control channel form. In addition, storage of up to 76 acre-feet of spring run-off above the dam prevents peak flooding flows from coursing downstream in all but exceptional water years, so natural fluvial erosional processes are very limited.

Water Quality

All surface waters in Idaho are protected for the following beneficial uses: wildlife habitat, agricultural water supply, and industrial water supply (Idaho Administrative Procedures Act [IDAPA 58.01.02]. All undesignated surface waters are protected for the following beneficial uses: primary or secondary contact recreation, cold water aquatic life, and the protection and propagation of fish, shellfish, and wildlife, where achievable.

The un-named stream which flows into H-D has an intermittent flow regime. Water quality standards only apply to intermittent waters during optimum flow periods sufficient enough to

support the beneficial uses for which the water body has been designated. The optimum flow for cold water aquatic life is equal to, or greater than, one cubic-feet-per-second (1 cfs). The optimum flow for contact recreation is \geq 5 cfs (IDAPA 58.01.02.070.07). Idaho Department of Environmental Quality (IDEQ) assumes intermittent streams meet stream temperature standards for seasonal cold water aquatic life during periods of optimum flow.

Neither the first order stream at H-D, nor the downstream second order receiving waters of Rattlesnake Creek is on the IDEQ 303(d) list of water quality impaired streams. The 2012 IDEQ Integrated Report show Rattlesnake Creek and Hoffman Reservoir as un-assessed (HUC D17050101SW020_01L John Hoffman Reservoir 7.19-acres), and HUC ID17050101SW020_02 Rattlesnake Creek above Mountain Home Reservoir (28.9-miles).

3.1.2 Environmental Consequences – Riparian/Wetland Areas, Stream Channels/Floodplains, and Water Quality

3.1.2.1 Alternative A

No change would occur to riparian areas, floodplains, or water quality, from that described above in Section 3.1. However, a dam failure would scour vegetation below H-D. Depending on the volume of water flowing out of the breeched dam, channel damage and sediment deposits could occur on up to 3.6 miles of stream channel before reaching Mountain Home Reservoir. Because of the intermittent flow, upland vegetation would recolonize most disturbed areas over the long term.

3.1.2.2 Alternative B

Riparian Areas

If water continues to seep from the toe-slope of the dam following re-construction, riparian vegetation would remain in the plant community. If the seep is stopped, the artificial riparian area would desiccate and the plant community would convert to upland vegetation over the long term (\geq 5 years).

Stream Channel and Floodplain

The stream planform and stability would remain unchanged following deconstruction of H-D. However, natural flooding-flows would occur more frequently as there would be less floodwater detention (currently 76 acre-feet) in the reservoir basin above the dam except for a small quantity (11.9 acre-feet) remaining in the reservoir. The increase in spring run-off flows would not be expected to have an adverse effect on the stability of the stream except under extraordinary natural circumstances, such as a localized flash-flood or a rain-on-snow events.

Water Quality

Water quality would be unaffected by the project, as no perennial stream flows occur in the stream above or below the dam. In addition, the trapezoidal spillway in the remaining dam would be lined with rock sufficient in size to prevent incisement into the finer underlying substrates of the remaining dam. Placing loose spoil materials on the upstream side of the dam, lightly compacting, and seeding would stabilize the materials over the long term and minimize potential for sediment input.

3.1.3 Cumulative Impacts – Riparian/Wetland Areas, Stream Channels/Floodplains, and Water Quality

3.1.3.1 Scope of Analysis

The cumulative impacts analysis is confined to the Rattlesnake Creek 5th order watershed downstream of the confluence of the unnamed stream below H-D with Rattlesnake Creek, and includes the Mountain Home Reservoir, approximately 6 miles downstream of H-D. The temporal scale is defined as any one *water-year* (November 1st to October 31st).

3.1.3.2 Current Conditions and Reasonably Foreseeable Future Actions

Rattlesnake Creek is intermittent below the confluence. It supports <0.5 miles of riparian habitat. The remaining stream channel (2.4 miles) is characterized by upland vegetation and unstable streambanks. It is the primary water source for Mountain Home Reservoir. When full, the reservoir is approximately 405 surface acres; however, it is used for irrigation and is partially or completely drawn down during the summer. The 0.5 mile segment of the tributary from H-D below the riparian area has ephemeral flows and is characterized by upland vegetation and a stable, mostly rock-armored channel. Water quality is affected by runoff from agricultural fields, State Highway 20, and rain events on burned areas in the watershed.

3.1.3.3 Cumulative Impacts - Alternative A

The H-D dam and reservoir would have negligible additive impacts to riparian habitat, stream channels, and water quality as long as the reservoir's integrity is maintained. A dam failure would have moderate additive impacts of channel modification and sediments until disturbed areas revegetated. Agricultural and highway runoff provides seasonal and regular input of minor amounts of sediment and minor to moderate amounts of chemicals that adversely affect water quality. Depending on intensity, climatological events on burned areas could provide minor to major sediment inputs and damage to riparian vegetation and stream channel morphology. Typically, vegetation becomes re-established in 1-5 years and stream channels stabilize in 2-10 years.

3.1.3.4 Cumulative Impacts - Alternative B

Cumulative impacts from other sources would be as described in Section 3.1.3.3. Modification of H-D would have minor to moderate additive benefits by eliminating the potential of dam failure and associated stream channel alteration and sediment input. There would be minor additive adverse effects by the eventual elimination of 550 feet of riparian habitat.

3.2 Wildlife/Special Status Animals

3.2.1 Affected Environment – Wildlife/Special Status Animals

The project area (PA) is located in the Snake River Plain, Mountain Home Uplands Ecoregion. Wildlife habitat in the PA is generally in poor condition as the uplands support cheatgrass, medusahead wildrye, bulbous bluegrass, and big sagebrush communities. Native grasses and forbs are limited and rare in annual grass stands and in sagebrush understories, therefore the diversity of vegetation and structure does not support a diverse wildlife population.

Greater Sage-grouse

Greater sage-grouse (BLM Type 2 Special Status Species) may use Wyoming big sagebrush as cover during the winter season. Winter use in the PA is unlikely as more desirable winter habitat in the Mountain Home foothills north of the PA is available and there is available sagebrush cover free from disturbance associated with Highway 20. The PA is beyond the breeding and brood-rearing range of the Mountain home sage-grouse population. Impacts to sage-grouse winter habitat would be negligible and will not be analyzed further.

Migratory Birds

The reservoir and artificial riparian habitat below the dam supports stop over habitat for waterfowl (up to 15 surface acres of open water) and migratory birds. Shrub nesting species may nest in big sagebrush at the site, but the paucity of native vegetation and low species diversity provides marginal breeding and foraging habitat.

Ungulates

Upland habitat supports potential winter habitat for elk, mule deer, and pronghorn. Pronghorn utilize the available succulent plants at the reservoir as water drains and evaporates throughout the summer.

3.2.2 Environmental Consequences – Wildlife/Special Status Animals

General Discussion of Impacts

Changes in Habitat Quality/Structure – Human activities can directly and indirectly affect habitat quality and structure. Activities that eliminate vegetation cause a long-term loss of foraging, nesting, and escape cover.

Construction Disturbance - Construction activities can cause temporary disturbances in breeding or feeding behaviors which could reduce short-term reproductive fitness and condition, or expose animals to predation.

3.2.2.1 Alternative A

Current condition of upland and riparian wildlife habitat at the PA would remain unchanged or in the event of a dam breach, upland habitat would be inundated over the short-term. In the wake of a dam breach, nesting birds would likely be displaced from or abandon nest sites over the short-term. Water and succulent vegetation would be reduced or absent, adversely affecting migratory birds and ungulates.

3.2.2.2 Alternative B

Construction would occur during the late fall, outside of the general avian nesting season (March-June), and peak fall migration season (August-September) mitigating disturbance to migratory and resident birds potentially occupying the PA and encompassing habitat. Construction activity would have negligible disturbance impacts to migratory and resident birds.

Decommissioning the dam would result in reduced amounts of water in the reservoir, thus reducing the available stopover habitat to waterfowl and migratory birds over the long term. However, because the dam would be more stable, water (especially during the spring) would be consistently available. Water and succulent vegetation would be reduced relative to Alternative

A (when dam regularly fills), but greater than when no water would be present after a dam failure.

3.2.3 Cumulative Impacts - Wildlife/Special Status Animals

3.2.3.1 Scope of Analysis

The scope of analysis is 5 mile buffer around the PA. The buffer includes habitat that would support home ranges for foraging by typical resident or nesting birds, small mammal species, as well as the Mountain Home (MH) Reservoir which supports habitat for waterfowl and migratory birds.

3.2.3.2 Current Conditions and Reasonably Foreseeable Future Actions

The MH Reservoir provides 405 surface acres of stopover habitat for waterfowl and migratory bird. The reservoir is well maintained, stable, and vegetation covers a large area compared to H-D. The reservoir is essentially used for irrigation purposes; stopover habitat is available in spring but may not be available through the summer, especially during drought conditions, or at the end of the agricultural growing season (fall migration), which varies depending on annual precipitation. Disturbance impacts at MH Reservoir are greater in magnitude, relative to those at H-D, which is further away from Highway 20 and less accessible then MH Reservoir. Disturbance impacts include recreational uses (fishing and off-road vehicle use), noise and traffic (animal collisions) associated with State Highway 20, and residential/farming activities. In general these disturbances will continue over the long term.

3.2.3.3 Cumulative Impacts - Alternative A

Not maintaining H-D would result in the potential loss of available stopover habitat in the cumulative impacts analysis area if a dam failure at H-D were to occur. The loss of stopover habitat would be minor over the long term as the H-D supports 4% of the available stopover habitat (405 surface acres) at the MH Reservoir.

3.2.3.4 Cumulative Impacts - Alternative B

Reconstruction of H-D would reduce the total available stopover habitat in the CI area long term. Similar to Alternative A, loss of stopover habitat at H-D would be minor as MH Reservoir provides a greater amount of stopover habitat for waterfowl and migratory birds.

3.3 Public Safety/Social and Economic

3.3.1 Affected Environment – Public Safety/Social and Economic Public Safety

The H-D dam was constructed in 1915. No engineering details exist to show how this facility was constructed; however, examinations of the site indicate that a core-trench was not constructed as the dam sits atop fractured basalt bedrock. Further evidence of this is indicated by the seepage of water through the toe-slope below the dam. Seepage persists even when the hydraulic pressure generated by the water column in the reservoir is less than 2 feet. This condition could result in catastrophic failure if the flows erode the foundation of the dam. In addition, saturation of the unconsolidated dam fill-materials could result in a viscous condition in which fill materials on the dam face could be mobilized and fail, as occurs in a rotational

landslide. Even though the reservoir has existed for 97 years without failure, the absence of a core trench makes this dam susceptible to catastrophic failure, particularly if a significant seismic or rain-on-snow event should occur when the reservoir is at full capacity.

In addition to faulty engineering, minimal maintenance has occurred, most recently in 2005. IDWR inspections report significant wave-caused erosion on the dam face, and erosion generated by livestock trampling and trailing on the reservoir crest, together with inoperable head-works (dump-gates). Further, removing woody vegetation on the dam face is listed as a necessary maintenance item.

Social and Economic

The reservoir provides up to 91 acre-feet of livestock water in the 13,000 acre Rock Lake Pasture of the Mountain Home Subunit Allotment. The pasture is used in the spring and fall and has no natural water sources.

3.3.2 Environmental Consequences – Public Safety/Social and Economic

3.3.2.1 Alternative A

Public Safety

In the worst case, failure of this dam could result in as much as 76 acre-feet of water coursing downstream, destroying human infrastructure, including State Highway 20, residential buildings, farm buildings, and farm ground. In addition, the headworks and dam at Mountain Home Reservoir could be threatened if the storage basins at both reservoirs were full when failure occurs.

Social and Economic

The reservoir would continue to provide livestock water over the long term. However, because of leakage, the amount would vary and little water would be available during the fall. In the event of dam failure, the available water would be greatly reduced or eliminated.

3.3.2.2 Alternative B

Public Safety

Deconstructing H-D would remove the substantial threat of catastrophic dam failure over the short through long term. There would be no public safety issue associated with the remaining stock pond.

Social and Economic

The reservoir would continue to provide livestock water over the long term. Because the reservoir would be smaller, available water would be less than Alternative A and in some years would not be available during the fall use period. However, the elimination of leakage and structural weaknesses would help insure annual water availability over the long term.

3.3.3 Cumulative Impacts - Public Safety/Social and Economic

3.3.3.1 Scope of Analysis

The scope of analysis is the same as described in Section 3.1.3 for public safety and the Rock Lake Pasture of the Mountain Home Subunit Allotment for Social and Economic.

3.3.3.2 Current Conditions and Reasonably Foreseeable Future Actions

The 3-acre Lamberton Reservoir, on Rattlesnake Creek, is above the confluence with the H-D tributary. There are two residences within 1 mile downstream of the reservoir. The 10,000+ acre watershed above the residences has burned one to four times between 1957 and 2013 and is characterized by perennial and exotic annual grasses. Recently burned areas are susceptible to erosion during flood events (e.g., thunderstorms, rain-on-snow events). In adjacent burned drainages, past flood events have resulted in minor to major sediment flows, stream channel alterations, and riparian vegetation damage. Approximately 75% of the watershed burned in the 2012 Stout and 2013 Pony fires.

In addition to H-D, water sources in the Rock Lake Pasture include water hauling, a small reservoir in T 03 S R 08 E Section 17, and Rattlesnake Creek. The reservoirs and stream often are dry during the fall use period.

3.3.3.3 Cumulative Impacts - Alternative A

Public Safety

Flooding caused by an H-D failure would have a minor to moderate adverse additive impact to public safety. Climatic events in burned areas would have a greater likelihood of adversely affecting public safety as fires and subsequent high intensity rain events occur regularly in the area. The potential for flooding is greatest during the first two years after fire until vegetation recovers; however, areas would be more susceptible to flooding until shrub cover is reestablished.

Social and Economic

A consistent water source at H-D would have minor to moderate additive benefits over the long term. Lack of water in the event of dam failure would have minor to moderate additive adverse impacts. Other water sources would be available and water hauling could make up for the loss.

3.3.3.4 Cumulative Impacts - Alternative B

Public Safety

Eliminating the potential for an H-D failure would have a minor to moderate additive benefit to public safety over the long term. Other impacts to public safety would be as described in Section 3.3.3.3.

Social and Economic

A consistent water source at H-D would have minor to moderate additive benefits over the long term.

3.4 Cultural Resources

3.4.1 Affected Environment – Cultural Resources

For cultural resource management purposes, the area of potential effect (APE) on BLM-administered lands was defined as the access road from State Highway 20, in addition to the existing dam and the reservoir with a 30 foot buffer.

The FRFO archaeologist conducted a records review (Class I Inventory) using existing data. The GIS database used by the BLM and the Idaho State Historic Preservation Office (SHPO) indicated that a lithic scatter was located near the dam and reservoir. Other cultural sites had been recorded nearby, but were located outside the APE. The FRFO archaeologist and an archaeological technician conducted a Class III Cultural Resource Survey of the APE. They recorded the dam and reservoir as a cultural resource site; however, those features were evaluated as not being eligible to be listed on the National Register of Historic Places (NRHP). They re-recorded the lithic scatter noted above and recorded one isolated projectile point. The isolated artifact by definition is not eligible to be listed on the NRHP

3.4.2 Environmental Consequences – Cultural Resources

General Discussion of Impacts

Direct impacts to cultural resources associated with dam reconstruction include: driving and staging transport vehicles; staging materials and personnel; driving heavy equipment and dump trucks; and lowering the dam height. Direct impacts could damage and reposition artifacts, and damage cultural features.

Indirect impacts to cultural resources include increased erosion caused by filling the reservoir with water, and the increased erosion caused by wave actions driven by the winds. The increased erosion could uncover buried artifacts or cultural resource features. Water held in the reservoir would also be used by grazing livestock to drink from, and this congregating activity could increase erosion and displace artifacts where livestock congregate.

These impacts can cause short- (≤ 1 year) and long-term (>1 year) effects. The indirect effects of trampling and ingesting vegetative cover at a site would be short term because vegetation would grow back in time. Slight erosion on a site caused by livestock could be short-term because of vegetative regrowth. The magnitude of these examples would be considered to be a negligible effect to site integrity.

3.4.2.1 Alternative A

Negligible to minor impacts from reservoir level fluctuations, waves, and livestock congregation would occur to the dam and reservoir, but would not adversely impact any eligible sites. Dam failure would modify the dam and reservoir, but it would not be considered an adverse effect to the site because the both the dam and reservoir were noted as not eligible to be listed on the National Register of Historic Places (NRHP). Furthermore, the site record has already recorded any important information the site would yield.

3.4.2.2 Alternative B

Reconstructing H-D could impact the nearby lithic scatter; however the FRFO archaeologist has proposed stipulations to flag and avoid the lithic scatter site; therefore, no direct impacts would occur. Lowering the dam height would impact that site, but it would not be considered an adverse effect to the dam and reservoir because the dam and reservoir were noted as not eligible to be listed on the National Register of Historic Places (NRHP). The isolated artifact could be impacted, but will likely be avoided due to the distance from planned activities.

3.4.3 Cumulative Impacts - Cultural Resources

Because no eligible sites would be affected in either alternative, cumulative impacts will not be addressed.

4.0 Consultation and Coordination

Local ranchers and livestock permittees were contacted and informed of the project. BLM State Office engineers were consulted, and provided the engineering design. The cultural resource survey results and site forms were sent to the Idaho State Historic Preservation Office (SHPO) for their review and comment.

4.1 List of Preparers

J. Allen Tarter, Natural Resources Specialist Dean Shaw. Archaeologist Joseph Weldon, Wildlife Biologist Mark Steiger, Botanist

4.2 List of Agencies, Organizations, and Individuals Consulted

Idaho Department of Water Resources Local affected livestock permittees BLM Four Rivers Field Office staffers

Native American Consultation

BLM is required to consult with Native American tribes to "help assure (1) that federally recognized tribal governments and Native American individuals, whose traditional uses of public land might be affected by a proposed action, will have sufficient opportunity to contribute to the decision, and (2) that the decision maker will give tribal concerns proper consideration" (U.S. Department of the Interior, *BLM Manual Handbook H-8120-1*). Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to cultural resources which are referred to as "cultural resource authorities," and under regulations that are not specific which are termed "general authorities." Cultural resource authorities include: the *National Historic Preservation Act of 1966*, as amended (NHPA); the *Archaeological Resources Protection Act of 1979*; and the *Native American Graves Protection and Repatriation Act of 1990, as amended*. General authorities include: the *American Indian Religious Freedom Act of 1979*; the NEPA; the FLPMA; and *Executive Order 13007-Indian Sacred Sites*. The proposed action is in compliance with the aforementioned authorities.

Southwest Idaho is the homeland of two culturally and linguistically related tribes: the Northern Shoshone and the Northern Paiute. In the latter half of the 19th century, a reservation was established at Duck Valley on the Nevada/Idaho border west of the Bruneau River. Today, the Shoshone-Paiute Tribes residing on the Duck Valley Reservation actively practice their culture and retain aboriginal rights and/or interests in this area. The Shoshone-Paiute Tribes assert aboriginal rights to their traditional homelands as their treaties with the United States, the Boise Valley Treaty of 1864 and the Bruneau Valley Treaty of 1866, which would have extinguished aboriginal title to the lands now federally administered, were never ratified.

Other tribes that have ties to southwest Idaho include the Bannock Tribe and the Nez Perce Tribe. Southeast Idaho is the homeland of the Northern Shoshone Tribe and the Bannock Tribe. In 1867 a reservation was established at Fort Hall in southeastern Idaho. The Fort Bridger Treaty of 1868 applies to BLM's relationship with the Shoshone-Bannock Tribes. The northern part of the BLM's Boise District was also inhabited by the Nez Perce Tribe. The Nez Perce signed treaties in 1855, 1863 and 1868. BLM considers off-reservation treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on the public lands for all tribes that may be affected by a proposed action.

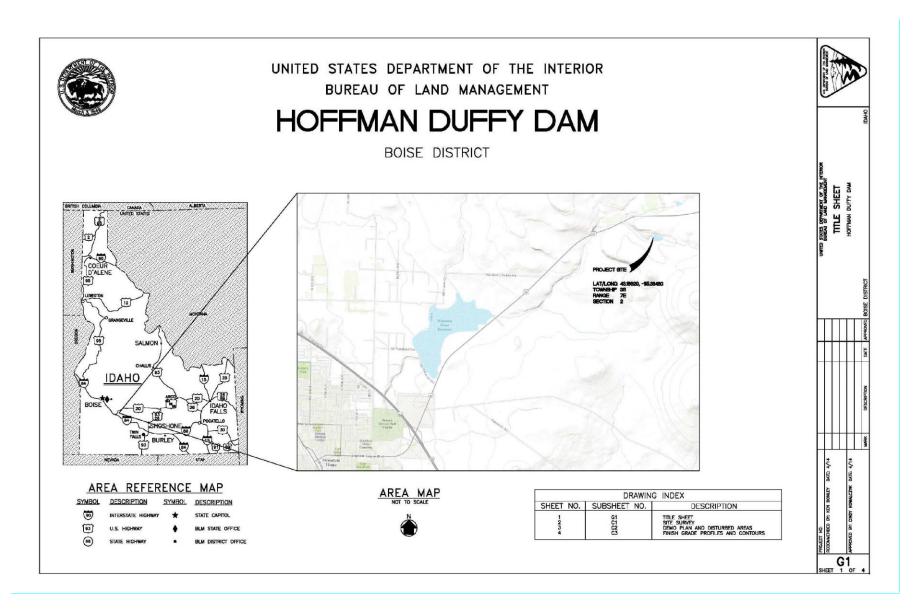
The Shoshone-Paiute Tribes were consulted during the August 21, 2014 Wings and Roots Program, Native American Campfire meeting with minor concerns being addressed during a site visit on September 3, 2014. No concerns were raised at that meeting.

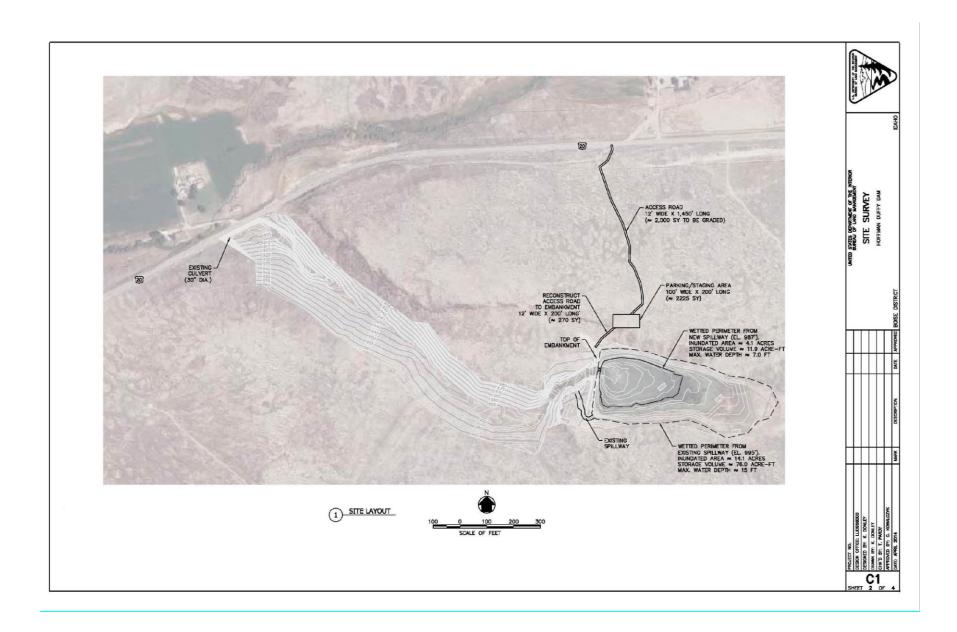
4.3 Public Participation

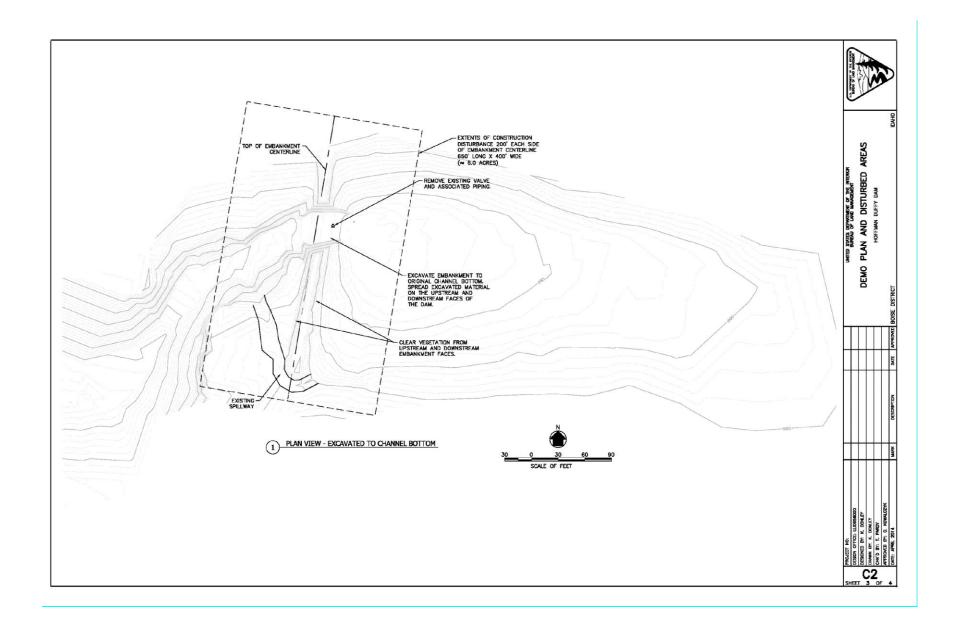
Due to the non-controversial nature of the proposed action, no public meetings were held.

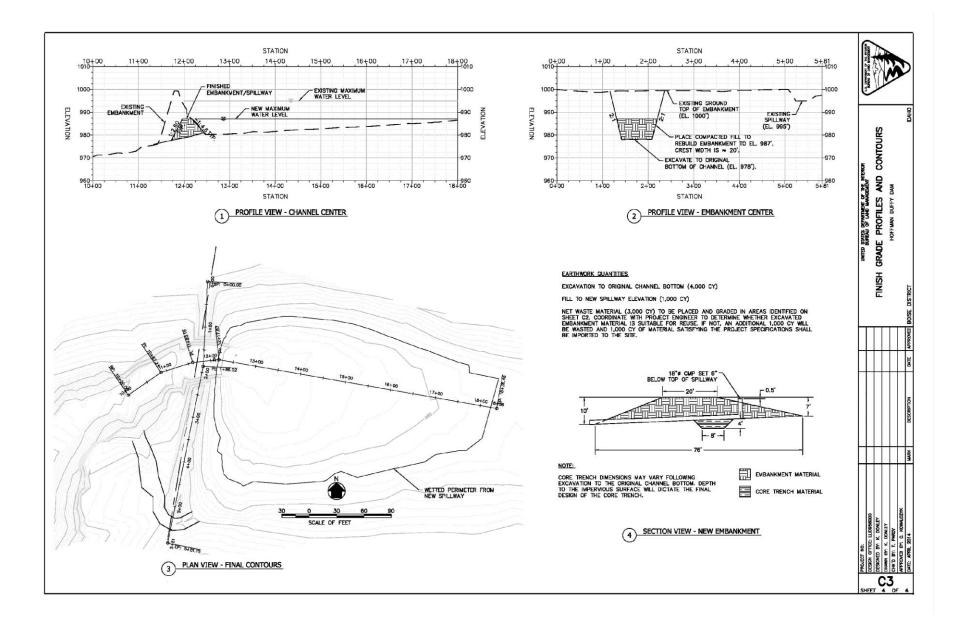
5.0 Appendices

Appendix 1. Engineering drawings and specifications for Hoffman-Duffy Dam Reconstruction, Elmore County, Idaho.



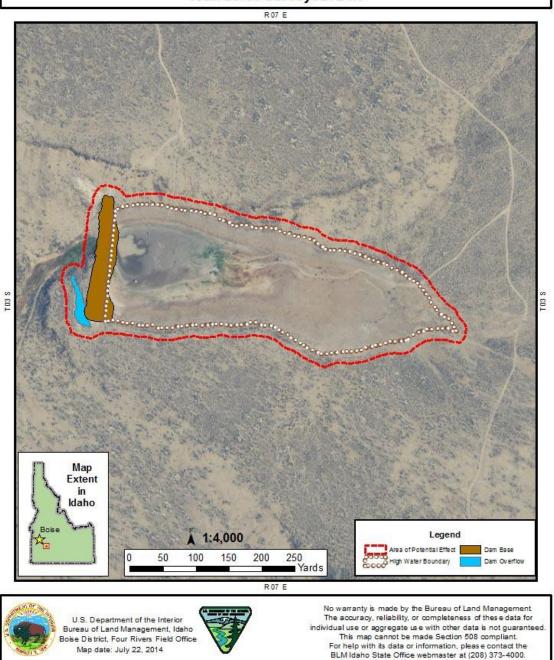






6.0 Maps

14-FRFO-22 John Hoffman Reservoir BLM Boise District, Four Rivers Field Office Township: 3S 7E sec 2, Quad map: Teapot Dome Total acres surveyed: 21.5



14-FRFO-22 John Hoffman Reservoir BLM Boise District, Four Rivers Field Office Township: 3S 7E sec 2, Quad map: Teapot Dome Total acres surveyed: 21.5

R 07 E ohn Hoffman Мар Extent ldaho A 1:4,000 Legend Area of Potential Effect 150 50 200 250 Yards No warranty is made by the Bureau of Land Management The accuracy, reliability, or completeness of these data for U.S. Department of the Interior Bureau of Land Management, Idaho individual use or aggregate use with other data is not guaranteed. This map cannot be made Section 508 compliant. Boise District, Four Rivers Field Office For help with its data or information, please contact the Map date: July 22, 2014 BLM Idaho State Office webmaster at (208) 373-4000.

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